

# **Demystifying the differences in the impact of training and incentives on employee performance: Mediating roles of trust and knowledge sharing**

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**Purpose** – This paper seeks to investigate the differences in the mediating roles of trust and knowledge sharing (formal vs. informal) in the process by which training and incentives influence organizational performance (sales increase and labor productivity).

**Design/methodology/approach** – Data from an online survey of senior managers from 119 firms in Hong Kong's Clothing industry was analyzed using SmartPLS software.

**Findings** - Trust has a stronger mediating impact in the effects of incentives (vs. training) on both formal and informal knowledge sharing. Informal (vs. formal) knowledge sharing has a stronger mediating impact in the effects of trust on sales increase and labor productivity.

**Research limitations/implications** – Future research may consider different dimensions such as knowledge donating and collecting behaviors as well as motives, such as self-enjoyment, reciprocity or social interaction ties to study knowledge sharing behavior.

**Practical implications** – This study shows that incentives are more likely than training to help build a trusting environment in an organization and that informal knowledge sharing has a stronger influence on organizational performance than formal knowledge sharing.

**Originality/Value** – The study's distinctive contribution is the under-researched context of Hong Kong Clothing Industry for investigating the mediating effects of trust and formal and informal knowledge sharing between ability and motivational practices on performance.

**Paper type:** Research paper

**Keywords:** incentives; knowledge sharing; labor productivity; sales increase; training; trust

## Introduction

The use of ability and motivation enhancing practices by employers has been linked to employee, business unit and overall organizational performance (Aryee *et al.*, 2016; Gardner *et al.*, 2011; Jiang *et al.*, 2012; Vroom, 1964). However, there is limited research on the underlying processes of social relations at work, such as the presence of interpersonal trust (Mooradian *et al.*, 2006) on employee and organizational performance (e.g., increase in sales and labor productivity). In this context, social and contextual influences, such as social interactional ties between employees and managers, have been identified as key drivers of knowledge sharing behaviors within organizations (Wickramasinghe and Widyaratne, 2012). The importance of developing a trusting environment is also critical in developing a more comprehensive picture of why employees share knowledge in organizations in the presence of other individual and contextual factors, such as personality types, personal motivation and skill levels of employees (Jadin *et al.*, 2013; Mooradian *et al.*, 2006; Wang *et al.*, 2014).

Past research also suggests that knowledge, skills and abilities alone may not be able to help employees improve their performance (Delery and Shaw, 2001). Hence, the underexplored role of opportunity enhancing practices (e.g., participative decision-making and increased job discretion) is being recognized as a key path to help employees improve their performance by empowering them and motivating them to use their discretionary effort to perform better (Boxall and Purcell, 2003; Jiang *et al.*, 2012; Malik, 2018). Researchers have also identified knowledge as a strategic resource for value creation (Wang *et al.*, 2016) and the vital role played by knowledge sharing between senior management and employees in achieving sustained growth and profits (Kaplan and Norton, 2001; Quigley, 1994; Witherspoon *et al.*, 2013). However, the underlying process by which HRM practices may influence knowledge sharing among employees and its impact on their performance is still not clear.

Accordingly, there are calls for research combining the ability-enhancing (e.g., investment in training), motivation-enhancing (e.g., incentives) and investment in social relations at work with concepts such as knowledge integration (Malik and Nilakant, 2016; Malik *et al.*, 2019) and knowledge sharing (Nguyen *et al.*, 2019) to explore the crucial role of trust and empowerment-based designs for better employee and organizational performance. The above practices have been found to have a positive impact on performance of a system and behaviors of employees by creating a social and cultural context that encourages knowledge sharing (Becker and Huselid, 1998; Cabrera and Cabrera, 2005; Foss *et al.*, 2009; Guest, 1997, Shih *et al.*, 2006; Minbaeva *et al.*, 2003; Minbaeva, 2013).

Researchers also distinguish between formal and informal knowledge sharing and their impact on organizational performance (Kumari and Takahashi, 2014; Witherspoon *et al.*, 2013). For example, formal knowledge is systematically stored in databases, libraries or manuals (Nonaka, 1994) and can be easily transferred through instituting formal rules and structures in an organization (Leonard-Barton, 1995; Zahra *et al.*, 2007). Most knowledge that is formally stored is also called explicit knowledge as it resides in readily accessible artefacts and structural elements of a workplace. Informal knowledge sharing is highly personal and depends on an individual's daily work routines, trust, and face-to-face interactions between colleagues (Nonaka 2008; Nonaka and Konno, 1998). Informal approaches to knowledge sharing rely extensively on a trust-based environment created by an organization's employees, leaders and managers (Davison *et al.*, 2013; Koskinen *et al.*, 2003).

All knowledge that is inside an individual's mind is referred to as tacit knowledge, however, tacit knowledge is also created and brought out into the explicit modes of learning through social interactions between individuals who are willing to share their tacit knowledge via formal and informal means. A recent study shows that explicit and tacit knowledge sharing

mediate the relationships between a range of organizational practices and cultural factors on technological innovation in small and medium enterprises (Yao *et al.*, 2020). However, the current literature on knowledge sharing and its antecedents focuses mostly on the motivation to share knowledge and does not explore the differences in the impact of formal and informal knowledge sharing on employee and organizational performance (e.g., Grossman, 2007; Nguyen *et al.*, 2019; van Rooi and Snyman, 2006; Yahya and Goh, 2002). As a result, it is still not clear which of the ability, motivation or social relations factors have a stronger impact on formal (vs. informal) knowledge sharing and the differences in their effects on performance outcomes. This understanding is critical as employees share knowledge through formal and informal means and in the presence of different types of HRM practices.

This paper addresses the above research gaps by exploring the mediating role of trust and knowledge sharing (both formal and informal) in the impact of HRM practices that enhance employees ability (e.g., training) and motivation (e.g., incentives) on the organizational performance (e.g., sales increase and labor productivity). Specifically, the authors develop a conceptual model with three parts. The first part examines the differences in the impact of two HRM practices (training and incentives) on interpersonal trust in the workplace. The second part explores the differences in the impact of interpersonal trust on two types of knowledge sharing (formal and informal). Finally, the third part examines the differences in the impact of formal and informal knowledge sharing on two organizational performance indicators (sales increase and labor productivity). An online study of senior managers of 119 firms from Hong Kong shows support for most of the hypothesized relationships. The authors discuss the theoretical contribution and managerial implications of their findings along with the limitations of this study and some useful directions for future research.

## Literature review

### *Roles of training and incentives as HRM practices*

Prior research on the impact of HRM practices in building employees' ability and motivation refers to the *ability* of employees as a set of knowledge, skills and competences required for completing one's work (e.g., Appelbaum *et al.*, 2000; Malik, 2018). Subramanian and Youndt (2005) highlight the importance of skills for individual work performance and functional expertise of employees. While an employee brings certain generic and specific skills to the job, their performance on the job can be further improved by providing employer sponsored job-specific training and development (Appelbaum *et al.*, 2000; Malik, 2018). Investment in training and development enhances individuals' human capital and firms' absorptive capacity (Jerez-Gómez *et al.*, 2004; Malik, 2018) and the effectiveness of line managers may decline due to inadequate training (Whittaker and Marchington, 2003). Formal and informal training is also known to build the affective commitment of employees as well as positively impact formal and informal knowledge sharing (Zárraga and Bonache, 2003). Investment in training helps firms realize employees' discretionary behavior by equipping them with new skills and building a positive psychological contract, which leads to changes in their attitudes and behaviors, including their willingness to integrate and share knowledge (Malik and Nilakant, 2016; Malik *et al.*, 2019; Nguyen *et al.*, 2019).

While employees may be skilled and knowledgeable to perform their routine workplace tasks, they must also be motivated to use their normal and discretionary effort for achieving high levels of performance (Appelbaum *et al.*, 2000; Malik, 2018). *Motivation*, therefore, reflects an employee's willingness to exert effort at work (Jiang *et al.*, 2012), and is evident in the intensity, direction and duration of employees' efforts toward work activities for achieving high performance (Jiang *et al.*, 2012). Motivating employees to exert such efforts

typically involves provision of incentives and rewards for workers (Bartol and Srivastava, 2002). In fact, as part of the ability-motivation framework, Vroom (1964) had established much earlier the impact extrinsic and intrinsic rewards as incentives to extract desired attitudes and behaviors from employees (Blumberg and Pringle, 1982). Incentives have an impact on reciprocity and as a consequence developing favorable attitudes and desired behaviors of employees (Appelbaum *et al.*, 2000; Boxall and Purcell, 2003; Malik, 2018; Minbaeva, 2013). Rewarding new skills and knowledge creation also encourages individuals to experiment with novel ideas and new knowledge creation (Jerez-Gómez *et al.*, 2005).

While ability and motivation are widely known to impact a range of performance outcomes, there are calls for considering the impact of mediating factors that operate in a firm's social relations at work (Boxall *et al.*, 2016). One such practice that can be considered as a key mechanism is interpersonal trust (Mooradian *et al.*, 2006) between employees and their managers and refers part of environmental factors that are beyond the control of an employee, yet have a profound impact on their ability to effectively apply their knowledge, skills and motivation to perform (Blumberg and Pringle, 1982; Jiang *et al.*, 2012). This paper contributes by focusing on the hitherto neglected role of interpersonal trust in the work environment. Specifically, a work environment where employees can trust their peers and managers to carry out tasks when they need them the most as well as feel that their managers will treat them fairly, support and encourage them to carry out their tasks. Such an approach may create the opportunity for employees and lead to positive work environment perceptions.

#### *Interpersonal trust in the workplace*

Interpersonal trust in the workplace is defined as the “willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party”

(Mayer *et al.*, 1995, p. 712). Interpersonal trust depends on contextual factors such as peers and managers and other organizational factors that affect it and it is known to be a stable predictor of a number of attitudinal and behavioral outcomes such as job satisfaction, commitment, productivity and knowledge sharing (Kramer, 1999; Levin and Cross, 2004). Interpersonal trust also acts as a mediator between ability and commitment factors such that motivation has a strong association with firm performance related factors (Heavey *et al.*, 2011). Colquitt *et al.* (2012) regard interpersonal trust as an exchange-deepening relationship and a behind the scene mechanism wherein it creates reciprocity among employees and managers such that their behaviors are contingent on trust in the relationship. Employee motivation affects interpersonal trust that employees have in their co-workers and managers and it leads to better behavioral outcomes (Alalwan *et al.*, 2015; Leat and El-Kot, 2009).

#### *Formal and informal knowledge sharing*

Knowledge sharing in organizations focuses on communicating and transferring explicit and tacit forms of knowledge between individuals and teams for its productive use through both structured and unstructured means. Knowledge sharing can be broadly classified into two modes - informal and formal. Both these approaches are highly relevant in attracting and retaining talented, loyal, and productive workforce (Smith, 2001) and are known to have an impact on building human, social and relational capital as well as operational and financial performance (Quigley *et al.*, 2007; Wang and Wang, 2012). Unstructured or tacit forms of knowledge are collectively held by individuals and are generally shared using informal mechanisms, such as informal chats and discussions but, sometimes also through formal mechanisms (Orlikowski, 2002). Communities of practice (Wenger and Snyder, 2000) and project- or team-based designs are also known for enhancing both formal and informal knowledge sharing (Swart and Kinnie, 2003). Formal knowledge sharing has a positive impact

on technological capabilities (Zahra *et al.*, 2007) and improved performance and value creating potential (Kogut and Zander, 1992), whereas informal knowledge sharing affects sales efficiency as well as success of marketing programs (Arnett and Wittmann, 2014). Formal knowledge sharing depends on organization size, geographical distance, perceived power structures and the degree to which organizations allow autonomy to their employees to engage in formal knowledge sharing (Riege, 2005).

## **Conceptual model and hypotheses**

### *Mediating role of trust*

Ability comprises both explicit and tacit knowledge and skills that workers possess, and it is an important factor in knowledge sharing because the competence of an employee is a core requirement for high work performance. Employees who have the requisite skills or are provided formal training and are in designated roles for disseminating and sharing knowledge are more likely to formally share relevant knowledge with others (Mueller, 2015). Therefore, organizations need to motivate their employees to engage in both formal and informal knowledge sharing behaviors (Ardichvili *et al.*, 2003; Ipe, 2003). This motivation can be intrinsic or extrinsic, but it must be mutually beneficial to both employees and the employer (Adler and Kwon, 2002). Intrinsic motivation provides a sense of fulfilment and confidence that drives employees toward a target (Huselid, 1995).

Perceptions of trust engender reciprocity among employees for sharing knowledge and support both formal and informal knowledge sharing behaviors (McAdam *et al.*, 2012). Von Krogh *et al.* (2000) found trust and openness as critical factors in enabling informal and formal knowledge sharing. Empowering staff can facilitate their decision-making, which can then influence a firm's direction and task performance through employees' knowledge sharing



behaviors. Other studies have found that trust, knowledge sharing, and communication can drive employee motivation (De Long, 1997; Zárrega and Bonache, 2003; Ismail et al., 2007).

The literature on trust suggests trust as an exchange-deepening concept, wherein high levels of trust creates reciprocity among employees and managers, such that this may lead to them exhibiting behaviors, such as knowledge sharing, thereby highlighting that the relationship between training and incentives on attitudes and behaviors may be contingent on the degree of trust in the relationship between peers and managers (Colquitt et al., 2012; Mooradian et al., 2006). Mooradian *et al.* (2006) show that interpersonal trust mediates the relationship between individual level personality traits and knowledge sharing.

Several studies have also found differences in the impact of HRM practices on individuals' attitudinal and behavioral outcomes as well as unit level performance outcomes (Aryee et al., 2016; Gardner et al., 2011; Jiang et al., 2012; Malik et al., 2017; Vroom, 1964). For example, incentives motivate employees because of immediate perceived benefits compared to something like training that needs employees to put in effort from their side and its benefits may take time (Nguyen *et al.*, 2019). Moreover, incentive systems can increase effort and collaboration (Alder and Kwon, 2002) and facilitate knowledge sharing (Zárrega and Bonache, 2003) while absence of performance measures and incentives for knowledge sharing have an adverse impact on formal and informal knowledge sharing behaviors (McAdam *et al.*, 2012). Employees who are motivated and provided with appropriate rewards are more likely to share knowledge with others, both formally and informally (Bartol and Srivastava, 2002). Hence, incentives may play a stronger role in building trust than training because of their greater ability to motivate the employees to share knowledge with each other and with their managers. Accordingly, the authors hypothesize as follows:

**H1a.** *Trust has a stronger mediating effect in the impact of incentives (vs. training) on formal knowledge sharing.*

**H1b.** *Trust has a stronger mediating effect in the impact of incentives (vs. training) on informal knowledge sharing.*

#### *Mediating roles of formal and informal knowledge sharing*

The notion of high performance has been at the center of HRM studies (Boxall and Purcell, 2003) wherein through a set of HRM practices, employees can increase their ability and motivation leading to performance improvements. Through the collective performance of individuals, firms can achieve high performance for a range of performance outcomes such as increased operational and financial performance (Quigley *et al.*, 2007; Wang and Wang, 2012), sustained competitive advantage (Smith, 2001; Kogut and Zander, 1992), improved sales and marketing success (Arnett and Wittmann, 2014; Currie and Kerrin, 2003), improved innovation capabilities (Zahra *et al.*, 2007) and so on. In this context, Currie and Kerrin (2003) find the presence (absence) of trust has a positive (or negative) impact on formal and informal knowledge sharing as well as sales performance in a pharmaceutical firm. According to them, informal relationships and trust within a team were stronger predictors for better performance outcomes than formal and structural silos, as these prevented the development of trust and as a consequence sharing of information between functions.

As discussed earlier, knowledge sharing allows employees to develop their human, social and relational capital, which in turn may help the organizations improve their operational and financial performance (Quigley *et al.*, 2007; Wang and Wang, 2012). Specifically, both formal and informal knowledge sharing has positive effects on productivity, sales growth, innovation, and competitiveness and employee performance (Wang and Wang, 2012). However, past research also records differences in the way formal and informal knowledge sharing influence

firm performance. For example, Arnett and Wittmann (2014) show that informal exchange of tacit knowledge between sales and marketing teams may help improve marketing and sales performance; whereas others show that formal knowledge sharing may improve technological capabilities (Zahra et al., 2007) and create long-term growth potential (Kogut and Zander, 1992). Moreover, unlike informal knowledge sharing, formal knowledge sharing depends on the size and the structure of the organization and the degree of autonomy enjoyed by the employees (Riege, 2005), which may restrict the impact of formal knowledge sharing on short-term performance (e.g., sales and labor productivity). Hence, the authors hypothesize:

**H2a.** *Informal (vs. formal) knowledge sharing has a stronger mediating effect in the impact of trust on sales increase.*

**H2b.** *Informal (vs. formal) knowledge sharing has a stronger mediating effect in the impact of trust on labor productivity increase.*

Figure 1 shows all the constructs and the hypothesized relationships among them.

< Insert figure 1 about here >

## **Research design and methodology**

### *Sample and procedure*

This study uses data collected from senior management of Hong Kong Clothing Industry (HKCI) firms with offices in Hong Kong and businesses registered under the HSIC (Hong Kong Standard Industrial Classification Code). The sampling frame consisted of 900 HKCI-related firms covering four principal areas, namely services (material supply), manufacturing, products (owned brand) and product-trading companies. After receiving university ethics approval, an e-mail invitation with a cover letter was sent to the HKCI firms identified from

trade directories with a link to an online survey. Potential participants were informed that the questionnaire was anonymous and confidential, had received ethics approval, and that participation was voluntary. 119 valid responses were returned for a response rate of 13.2%, which is typical for surveys involving senior management (Pittino *et al.*, 2018). The typical firm was over five years old (59.7%), employed 50 or fewer employees (50.8%) and with annual average sales of US\$ 10 million or less over the past three years (55.5%).

Participating firms reflected the major sectors of the HKCI: manufacturing (33%), products (owned brand, 25%), product trading (24%) and services (material supply, 16%). The participants were asked to reflect on their firm's past three year's growth in sales performance and labor productivity in the survey, as Table 1 shows the sample profile.

< Insert table 1 about here >

### *Measures*

This study used validated measures drawn from the literature (See Table 2 for item details). For example, both training for workers and incentives were operationalized with five items each from Wong and Aspinwall (2005). Interpersonal trust was measured with six items from Mooradian *et al.* (2006). Formal and informal knowledge sharing were measured using five items each from Zahra *et al.* (2007). All these scales use a 7-point Likert response format (1 = strongly disagree to 7 = strongly agree). Finally, the two outcome variables were measured as percentage increases in sales and labor productivity in the past three years, both using a five-point interval scale (<10%, 10%-40%, 40%-70%, 70%-100% and >100%), as the participants were not willing to share the exact figures due to their sensitive nature.

To control for firm heterogeneity, family controlled business (FCB) and firm size were included as control variables (Eddleston *et al.*, 2010; Zahra *et al.*, 2007; Zahra *et al.*, 2008). FCB is a business in which the majority of management stake lies in the hands of a family

and its family members are directly involved in running the business (Chua *et al.*, 2004). Two items from Chua *et al.* (2004) were used to measure; 1) the percentage of family ownership of business, and 2) the percentage of family members being managers in the business, both using a five-point scale. Firm size was measure by the number of employees, also with a five-point scale. Table 2 summarizes the descriptive and psychometric properties of the scales.

< Insert table 2 about here >

## **Data analysis and results**

Data was analyzed using Partial Least Squares (PLS) based Structural Equation Modeling (SEM) approach, with SmartPLS v3.2.8 (Hair *et al.*, 2017). PLS-SEM works efficiently with a wider range of sample sizes and model complexity and is ideal for studies with smaller sample sizes (Hair *et al.*, 2017), as in this study. PLS-SEM is also appropriate for prediction-based research, such as predicting the influence of trust on formal and informal knowledge sharing in this study. PLS-SEM estimates an endogenous target construct (e.g., informal knowledge sharing) in the model and maximize its explained value (Hair *et al.*, 2017). PLS-SEM is less sensitive to violations of assumptions of normal distributions (Hair *et al.*, 2017). Therefore, PLS-SEM is a suitable technique to analyses the data for this research.

### *Measurement model*

The *t*-values were calculated with the bootstrapping procedure of 5,000 samples as recommended (Hair *et al.*, 2017). As reported in Table 2, all the scale items have high factor loadings ( $> 0.70$ ) that are highly significant ( $p < 0.001$ ), which supports convergent validity. Moreover, the square root of the AVE for each construct is greater than the correlations for other constructs, and the items load strongly on the relevant construct, which confirms discriminant validity (Fornell and Larcker, 1981). The largest HTMT value (0.813) is below

the more conservative 0.85 threshold (Henseler *et al.*, 2015), and the HTMT confidence ratio does not include 1, confirming discriminant validity. All the variance inflation factor (VIF) values are also less than 2.6, hence, multicollinearity is not a concern (Hair *et al.*, 2017).

Table 3 presents the descriptive statistics and correlations for all the scales used in this study.

< Insert table 3 about here >

The authors also assessed potential common method bias (CMB) using Harman's single-factor test, as the data was from a single source (Podsakoff *et al.*, 2003). This showed that multiple factors emerged, with the single largest factor accounting for 48.9% of the variance, which is lower than the 50% threshold. Additionally, the authors use the full-collinearity test (Kock, 2015), which involves checking the VIF values for the structural model. Where the VIF values are equal to or lower than 3.3, this suggests that CMB is not present. Therefore, these tests indicate that CMB was not an issue for this study.

### *Structural model*

All the predictor variables in the model explain a high degree of variation in the outcome variables of trust ( $R^2 = 0.56$ ), formal knowledge sharing ( $R^2 = 0.48$ ) and informal knowledge sharing ( $R^2 = 0.38$ ), and lower levels of variation in sales increase ( $R^2 = 0.11$ ) and labor productivity increase ( $R^2 = 0.06$ ) because these outcomes are influenced by many other variables. The average variance accounted (0.32) is higher than the benchmark (0.10), hence, the model shows a high overall explanatory power for all the outcome variables.

< Insert table 4 about here >

Table 4 presents the direct relationships amongst the core constructs in the theoretical model (one-tailed tests used). First, both incentives ( $\beta = 0.63$ ,  $p < 0.001$ ) and training ( $\beta = 0.14$ ,  $p > 0.10$ ) have a positive but significantly different influence on trust. Trust also has significant

positive effects on both formal ( $\beta = 0.70, p < 0.001$ ) and informal ( $\beta = 0.62, p < 0.001$ ) knowledge sharing. Next, formal knowledge sharing has a significant negative effect on sales ( $\beta = -0.23, p < 0.05$ ), whereas informal knowledge sharing has a significant positive effect on sales ( $\beta = 0.40, p < 0.01$ ). By contrast, formal knowledge sharing has a non-significant, negative influence on labor productivity ( $\beta = -0.07, p > 0.10$ ), whereas informal knowledge sharing has a marginally significant positive influence on sales ( $\beta = 0.19, p < 0.10$ ).

< Insert Table 5 about here >

Table 5 shows the magnitude of the specific indirect effects to evaluate all the hypotheses. First, trust has a stronger mediating effect in the impact of incentives ( $\beta = 0.44, p < .001$ ) than training ( $\beta = 0.10, p > 0.10$ ) on formal knowledge sharing; thus, H1a is supported. Next, trust also has a stronger mediating effect in the impact of incentives ( $\beta = 0.39, p < .001$ ) than training ( $\beta = 0.08, p > 0.10$ ) on informal knowledge sharing; hence, H1b is also supported. Similarly, informal knowledge sharing ( $\beta = 0.25, p < 0.01$ ) has a stronger mediating effect than formal knowledge sharing ( $\beta = -0.16, p < 0.05$ ) in the impact of trust on sales increase; supporting H2a. Finally, informal knowledge sharing ( $\beta = 0.12, p < 0.10$ ) has a marginally significant (Babič *et al.*, 2019) but stronger mediating effect than formal knowledge sharing ( $\beta = -0.05, p > 0.10$ ), in the impact of trust on labor productivity; thus, H2b is also supported.

## **Discussion**

This paper contributes to current literatures on the HRM practices of training and incentives, the impact of trust in the workplace, and the role of formal and informal knowledge sharing (Blumberg and Pringle, 1982; Vroom, 1964; Zahra *et al.*, 2007), by exploring their impact on sales and labor productivity in the context of Hong Kong clothing industry. The literature on strategic HRM has often examined the influence of training and incentives on a range of

attitudinal, behavioral outcomes and firm level outcomes (Aryee *et al.*, 2016; Gardner *et al.*, 2011; Jiang *et al.*, 2012). However, there are limited studies on the impact of these practices in the presence of strong social relations such as empowerment and trust-based designs on employee's attitudinal, behavioral and firm level outcomes (Gardner *et al.*, 2011; Malik *et al.*, 2017). This study highlights the mediating effects of trust in the process by which training and incentives influence knowledge sharing behaviors, which in turn affects firm sales and labor productivity. Overall, there is support for the relationships between ability (training for workers) and motivation (providing incentive systems) and creating a trusting environment that encourages formal and informal knowledge sharing.

The mediating effect of trust in the impact of training and incentive systems on both formal (H1a) and informal (H1b) knowledge sharing, is one of the novel contributions of this study to the HRM and knowledge sharing literatures. Specifically, H1a results suggest that trust has a stronger mediating effect in the impact of incentive systems versus training on formal knowledge sharing. This finding highlights the importance of creating a trusting environment by leaders and managers as well as by co-workers themselves before they feel they can make themselves vulnerable to sharing knowledge. While employees may have the requisite knowledge, skills and ability but the presence of a formal incentive structure to motivate employees to apply those skills is based on the principle of reciprocity, but only when they also feel that the wider environment and work climate is one of trust, they will be less reluctant to share their knowledge (Malik *et al.*, 2019).

Next, the H1b results suggest that trust has a stronger mediating effect in the impact of incentives versus training on informal knowledge sharing. Building trust requires overcoming structural and functional boundaries as they act as a deterrent. This was borne out in a study by Currie and Kerrin (2003) where functional divisions (marketing and sales), created



structural silos between employees in these workplaces rendering informal sharing of tacit knowledge effective. As trust is viewed as a behind the scene and exchange deepening mechanism (Colquitt *et al.*, 2012), employees in small and medium FCBs often rely on informal mechanisms to share their knowledge informally, but only if these firms have created a culture of trust. Therefore, the overall H1 results provide empirical support that relative to training (ability) trust has a stronger mediating impact on the relationship between incentives and knowledge sharing (formal and informal).

In other words, incentives are critical for supporting reciprocity of exchange as well as a trusting workplace environment. Therefore, designing incentive and reward systems can be seen to be vital in providing new opportunities to learn and actualize one's full potential (Sharratt and Usoro, 2003; Wong and Aspinwall, 2005). Offering rewards is an effective way to motivate employees of a firm to share their knowledge with one another (Bartol and Srivastava, 2002). Experienced employees, however, have a negative attitude towards receiving benefits in return for knowledge sharing as they consider it as a normal business activity (Bock and Kim, 2001). Overall, these results are consistent with earlier studies and theoretical arguments advanced (Wong and Aspinwall, 2005; Sharratt and Usoro, 2003).

Next, H2a results suggest that informal knowledge sharing has a stronger mediating effect versus formal knowledge sharing in the impact of trust on sales increase. As noted by Currie and Kerrin (2003), structural and formal divisions prevent people from interacting across functions and develop trusting bonds between each other, which may results in conflicts and lack of coordination that in turn may partly explain the negative impact of formal knowledge sharing on sales increase in this study. Therefore, it is not surprising to see the employees develop mechanisms for informal knowledge sharing by building reciprocal and trusting relationships such that trust becomes is a critical factor in influencing informal knowledge

sharing and sales growth, which is reflected by the results of this study and confirms the findings reported by Arnett and Wittmann (2014).

Finally, H2b results suggest that knowledge sharing using face-to-face communication approaches had a positive impact on labor productivity (Salis and Williams, 2010), especially if there is a strong culture of reciprocity and trust existing in the workplace among peers and with managers (Mooradian *et al.*, 2006). This results supports the findings reported in past research in Chinese societies (e.g., Hong Kong) that mostly rely on informal knowledge sharing; wherein, the relationship between informal knowledge sharing and firm performance is higher where the relational capital elements, such as trust, mutual understanding and cohesion are relatively higher (Wang *et al.*, 2014).

## **Contributions and implications**

### *Theoretical contributions*

This study contributes to the understanding of formal and informal knowledge sharing in FCBs through the theoretical lens of the HRM practices and knowledge sharing. To the best of authors' knowledge, this study is one of the first attempts to examine the mediating role of trust in examining the relationship between HRM practices that enhance ability and motivation of employees and formal and informal knowledge sharing in the context of the HKCI. The empirical evidence from this study demonstrates statistically significant and positive relationships of the mediating role of trust in the relationship between skilled and motivated employees and formal and informal knowledge sharing. Hence, in line with earlier calls for examining the role of trust in the relationship between HRM practices and knowledge sharing (Nguyen *et al.*, 2019), this study offers a theoretical basis for researchers to conduct additional research within the broader domain of strategic HRM, using a wider

range of HRM practices and studying this in different industry contexts. This study also confirms Delery and Shaw's (2001) assertion that ability- and motivation-enhancing practices alone are not sufficient for high performance, highlighting the critical role of interpersonal trust as an exchange deepening mechanism for achieving knowledge sharing among employees. The implication of this line of thinking is that the greater the trust between coworkers and managers, the higher their obligation to reciprocate their knowledge sharing behavior. In the context of this research, the greater interpersonal trust strengthened the reciprocity of knowledge sharing exchange.

Next, this study explores the focal mediating role of trust in explaining the differences in the impact of incentives and training on knowledge sharing. Bakker *et al.* (2006) found that employees shared less knowledge with employees who they perceived as capable. Further, they shared knowledge with those they believed were fair and followed the principles of integrity. Motivation (formal and informal incentives) and to a lesser extent ability, has been noted as antecedents of trust (Mayer *et al.*, 1995; Nguyen *et al.*, 2019). There are two types of motivational contexts: intrinsic and extrinsic. While the former is more autonomous in nature and is driven by the individual, the latter has a control orientation attached to it and is driven by organizational reward policies. Recent research confirms the relationship between intrinsic and extrinsic motivational factors on knowledge sharing behaviors in an online setting (Nguyen and Malik, 2020).

In line with the above, Gagné (2009) asserts that autonomous motivation or, "intrinsically motivated people will want to share knowledge simply out of their passion for their work and as an expression of themselves" (p. 574). With this logic, it has been argued that intrinsically motivated employees would be less influenced to share knowledge due to perceived intensity of ability-enhancing practices. In other words, intrinsically motivated employees would not

need the push from training or ability enhancing mechanisms to share knowledge, especially when there is a strong environment of trust (Gagné, 2009; Kuvaas *et al.*, 2012). From a strategic HRM point of view, it allows to further delineate the nature of motivational paths in the presence of environments where interpersonal trust is high. Similarly, in explaining the mediating impact of knowledge sharing in the relationship between trust and performance, structural or control-oriented formal organizational processes have weaker explanatory power than autonomous and informal processes as interpersonal nature of trust relies on the personal and volitional informal relationships.

### *Managerial implications*

This research identifies several implications for HR managers. First, the findings suggest that HR managers should invest in training and development of employees and motivate them through intrinsic and extrinsic rewards to create an environment of trust such that workers can apply their skills and motivation to improve knowledge-management processes of formal and informal knowledge sharing (Cabrera and Cabrera, 2005; Lin, 2007; Zahra *et al.*, 2007). For example, training programs (e.g., team building and cross-training) not only help harness technological developments but also increase cognitive, structural and relational social capital levels to stimulate knowledge sharing behaviors (Cabrera and Cabrera, 2005; Kang *et al.*, 2003). Second, this study shows that compared to any training programs, having an incentive system that rewards and recognizes knowledge sharing behaviors through a trusting work environment can send prove to be a stronger motivation to the employees, which in turn may reflect in superior firm performance (Cabrera and Cabrera, 2005). These findings also support the results reported in past research, which show that an effective incentive system should incorporate both extrinsic and intrinsic rewards (Foss *et al.*, 2009) to encourage reciprocal behaviors in knowledge sharing (Fehr and Fischbacher, 2002).

Third, this study shows that interpersonal trust could be a vital mediating factor in fostering knowledge sharing behaviors as well as creating a context where informal knowledge sharing leads to sales increase and labor productivity. Thus, long-term relationships between managers and peers can improve the informal knowledge sharing performance within firms. Prior research shows that interpersonal trust can be improved by team-building, reducing the supervisor's expert powers and improving the efficiency of knowledge exchange and mutual understanding among peers, managers and staff. Trust is also the least costly and the most effective method to encourage people to share their knowledge (Sharratt and Usono, 2003), hence organizations should focus on building trust as a key enabling mechanism.

Finally, past research shows that knowledge sharing occurs when people who share a common purpose, experience similar problems come together to exchange ideas and hence, the distinctive characteristics of an organization would allow sharing of knowledge with a strong sense of identity (Lansberg, 1999). However, others show that FCBs often exercise too much personalized control on their employees through highly formal relationships (Redding 1996), which may hinder the process of knowledge sharing. In this context, this study shows that building a trusting environment may be an effective solution for motivating employee to share knowledge because it will encourage the development of a reciprocity norm (Cabrera and Cabrera, 2005). Thus, when employees perceives a firm as enhancing trustworthy values, such as honesty, reliability and mutual reciprocity, their commitment and motivation to share individual knowledge within that firm increases (Sharratt and Usono, 2003), which in turn would help improve the firm performance in terms of increased sales and labor productivity.

### **Limitations and future research**

This study has a few limitations that future research may address. First, it uses data collected in Hong Kong from the clothing industry players and the behaviors of employees and

managers in Hong Kong may not be generalizable to other Chinese or global clothing business communities. Hence, future research may test the generalizability of the findings of this study in other Asian countries such as Singapore, Vietnam and Taiwan covering a range of diverse public and private sectors, including the motivations of employees to share knowledge in a range of modes such as online and other organizational and external platforms. Further explorations about whether there are differences on account of individual characteristics such as gender, experience within one organization for motivations of employees to share knowledge via formal, informal and online mechanisms.

Second, this study uses a convenience sampling approach that may not represent the entire population being examined. Third, the correlational design of this study can only indicate the strength of the relationships among all the constructs and not provide a conclusive evidence of causality. Future research using other sampling methods and research designs may overcome these limitations. Fourth, external factors, such as staff turnover and market needs, may also influence decisions on training, incentive systems and trust (Baker *et al.*, 1988; Batt, 2002), hence future research may control for these variables. Finally, the conceptual model used in this paper needs to be examined in different research contexts such as different industries and cultural groups, as contextual factors may have an influence on the hypothesized relationships, especially as the explanatory power of the employee and business outcomes appear to be relatively low.

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**Table 1. Sample profile**

<b>Demographics</b>	<b><i>N</i> = 119</b>	<b>Percentage</b>
<b><i>Clothing industry category</i></b>		
Manufacturing	39	32.8%
Products (owned brand)	30	25.2%
Product trading	28	23.5%
Services (material supply)	19	16.0%
Others	3	2.5%
<b><i>Years of operations</i></b>		
1 year or less	27	22.7%
1 – 5 years	21	17.6%
5 – 10 years	14	11.8%
10 – 15 years	49	41.2%
Above 15 years	8	6.7%
<b><i>Average sales past 3 years (US\$)</i></b>		
1 million or less	37	31.1%
1 – 10 million	29	24.4%
10 – 50 million	12	10.1%
50 – 100 million	17	14.3%
Above 100 million	24	20.2%
<b><i>Number of employees</i></b>		
≤ 50	60	50.8%
51 – 200	14	11.9%
201 – 1000	19	16.1%
1001 – 3000	7	5.9%
3001 and above	18	15.3%
<b><i>Respondent designation</i></b>		
CEO/COO	15	12.9%
Managing Director	20	17.1%
General Manager	20	17.1%
Others	62	53.0%

**Table 2. Scale items and psychometrics**

<b>Scale items</b>	<b><math>\lambda</math></b>	<b><i>M</i></b>	<b><i>SD</i></b>
<b>Training</b>			
1. Training on the concepts of knowledge and knowledge management (KM).	0.87	4.50	1.54
2. Firm builds awareness of KM among employees through training.	0.92	4.59	1.43
3. Training is provided for using the KM system and tools.	0.92	4.26	1.55
4. Training for individuals is provided to take up knowledge-related roles.	0.88	4.39	1.47
5. Firm provides training in skills development such as creative thinking, problem solving, communication, soft networking, and team building.	0.91	4.33	1.63
<b>Incentives</b>			
6. Firm provides the right incentives to encourage behaviors for managing knowledge.	0.90	4.50	1.46
7. Firm motivates employees to seek knowledge.	0.91	4.67	1.44
8. Firm visibly rewards employees who share and use knowledge.	0.91	4.48	1.46
9. Firm rewards employees with an emphasis on group performance.	0.89	4.63	1.48
10. Firm has motivational approaches related to job performance and assessment systems.	0.92	4.53	1.38
<b>Trust</b>			
11. If employees got into difficulties at work, you know your colleagues would try and help them out.	0.90	5.08	1.33
12. Employees can trust the people they work with to lend them a hand if they needed.	0.89	4.97	1.29
13. Most of my colleagues can be relied upon to do as they say they will do.	0.85	4.82	1.25
14. Management at my firm is sincere in its attempts to meeting the employees' point of view and they treat me fairly.	0.89	4.74	1.39
15. Employees feel quite confident that the firm will always try to treat them fairly.	0.89	4.74	1.39
16. Management is quite prepared to gain advantage by motivating its employees.	0.90	4.77	1.29

**Formal knowledge sharing**

17. Employees frequently use formal communication channels to share information with other colleagues about “emerging technologies”.	0.89	4.46	1.27
18. Employees frequently use formal communication channels to share information with other colleagues about “technological developments”.	0.88	4.42	1.25
19. Employees frequently use formal communication channels to share information with other colleagues about “changes in industry conditions”.	0.90	4.34	1.33
20. Employees frequently use formal communication channels to share information with other colleagues about “changes in customer needs”.	0.83	4.52	1.30
21. Employees frequently use formal communication channels to share information with other colleagues about “change in the strategies and tactics of our competitors”.	0.88	4.35	1.38

**Informal knowledge sharing**

22. Employees frequently use informal communication channels to share information with other colleagues about “emerging technologies”.	0.90	4.55	1.25
23. Employees frequently use informal communication channels to share information with other colleagues about “technological developments”.	0.86	4.42	1.29
24. Employees frequently use informal communication channels to share information with other colleagues about “changes in industry conditions”.	0.92	4.57	1.31
25. Employees frequently use informal communication channels to share information with other colleagues about “changes in customer needs”.	0.91	4.61	1.35
26. Employees frequently use informal communication channels to share information with other colleagues about “change in the strategies and tactics of our competitors”.	0.94	4.57	1.29

**Sales increase**

27. Sales increase (%) over the past 3 years.	NA	1.40	0.68
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**Labor productivity increase**

28. Labor productivity (the revenue contributed by an on-duty worker) increase (%) over the past 3 years.	NA	1.33	0.61
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$\lambda$  = Parameter estimates (Standardized factor loading); M = Mean; SD = Standard deviation

**Table 3. Descriptive statistics and correlations**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1. Training	<b>0.90</b>						
2. Incentives	0.77***	<b>0.91</b>					
3. Trust	0.63***	0.74***	<b>0.89</b>				
4. Formal Knowledge Sharing	0.57***	0.68***	0.69***	<b>0.88</b>			
5. Informal Knowledge Sharing	0.59***	0.59***	0.61***	0.74***	<b>0.91</b>		
6. Sales Increase	0.21**	0.19**	0.19**	0.08	0.23**	<i>NA</i>	
7. Labor Productivity Increase	0.16**	0.16**	0.06	0.07	0.13*	0.16**	<i>NA</i>
Mean	4.41	4.56	4.85	4.42	4.54	1.33	1.40
Standard Deviation	1.37	1.31	1.18	1.14	1.17	0.61	0.68
Composite Reliability	0.95	0.96	0.96	0.94	0.96	NA	NA
Average Variance Extracted	0.81	0.82	0.80	0.77	0.82	NA	NA

Note: Values on the diagonal are square roots of average variances extracted. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 4. Structural model output – Direct effects**

Hypothesized relationship	$\beta$	<i>t</i> -value
<b>Trust</b>		
Training → Trust	0.14	1.23
Incentive Systems → Trust	0.63 <sup>***</sup>	6.82
Control: FCB → Trust	0.05	0.77
<i>R</i> <sup>2</sup> – Trust	0.56	
<b>Formal Knowledge Sharing</b>		
Trust → Formal Knowledge Sharing	0.70 <sup>***</sup>	13.12
Control: Employee Numbers → Formal Knowledge Sharing	0.01	0.22
<i>R</i> <sup>2</sup> – Formal Knowledge Sharing	0.48	
<b>Informal Knowledge Sharing</b>		
Trust → Informal Knowledge Sharing	0.62 <sup>***</sup>	9.70
Control: Employee Numbers → Informal Knowledge Sharing	-0.01	0.19
<i>R</i> <sup>2</sup> – Informal Knowledge Sharing	0.38	
<b>Sales Increase</b>		
Formal Knowledge Sharing → Sales	-0.23 <sup>*</sup>	1.76
Informal Knowledge Sharing → Sales	0.40 <sup>**</sup>	2.91
Control: Employee Numbers → Sales	0.17 <sup>**</sup>	2.37
<i>R</i> <sup>2</sup> – Sales	0.11	
<b>Labor Productivity</b>		
Formal Knowledge Sharing → Labor Productivity	-0.07	0.55
Informal Knowledge Sharing → Labor Productivity	0.19 <sup>#</sup>	1.32
Control: Employee Numbers → Labor Productivity	0.19 <sup>**</sup>	2.38
<i>R</i> <sup>2</sup> – Labor Productivity	0.06	

$\beta$  = Standardized Path Coefficients #  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 5. Structural model output - Indirect effects**

<b>Indirect Path</b>	<b><math>\beta</math></b>	<b><i>t</i>-value</b>
<b>H1a</b>		
Incentives → Trust → Formal Knowledge Sharing	0.44 <sup>***</sup>	5.76
Training → Trust → Formal Knowledge Sharing	0.10	1.22
<b>H1b</b>		
Incentives → Trust → Informal Knowledge Sharing	0.39 <sup>***</sup>	6.19
Training → Trust → Informal Knowledge Sharing	0.08	1.16
<b>H2a</b>		
Trust → Formal Knowledge Sharing → Sales Increase	-0.16 <sup>*</sup>	1.72
Trust → Informal Knowledge Sharing → Sales Increase	0.25 <sup>**</sup>	2.51
<b>H2b</b>		
Trust → Formal Knowledge Sharing → Labor Productivity Increase	-0.05	0.55
Trust → Informal Knowledge Sharing → Labor Productivity Increase	0.12 <sup>#</sup>	1.26

$\beta$  = Standardized Path Coefficients    <sup>#</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Figure 1. Conceptual model**

